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Book review

IUAES World Congress 2013: Evolving Humanity, Emerging Worlds, 5–10 August 2013.

‘Humans have no nature, what they have is history.’

The IUAES World Congress 2015 was held at Manchester University. Within the congress, three debates were held in the plenary hall. The first of these debated the motion: ‘Humans have no nature, what they have is history’. Tim Ingold (Aberdeen University) proposed the motion, seconded by Veena Das (Johns Hopkins University). Ruth Mace (University College London) opposed the motion, seconded by Juichi Yamagiwa (Kyoto University). The chair of the debate was Marilyn Strathern (Cambridge University). In the following, each of the speakers presents a text of their presentation, followed by a summary of the lively discussion in which members of the audience were invited to put questions to the speakers.

Humans have no nature; what they have is history

Tim Ingold (for the motion)

People differ the world over, and the study of these differences has always been the special province of anthropology. But is difference superimposed upon a baseline of characteristics that all human beings have in common? Is there such a thing as human nature? You may think it is obvious that human nature exists; I will argue that it does not. This may seem an odd contention – after all, we surely know another human being when we see one. People may differ a lot, but not so much that we ever have any problem in drawing the line between human beings and creatures of other kinds. It is clear to me that all of you assembled here are fellow humans, and that there are no chimpanzees in the audience. I can recognise a family resemblance. But if I search for an essence, a substrate that remains after all difference has been accounted for, I will not find it.

Consider the following. Each of us has a protuberance in the centre of the face with two holes that allow the inhalation and exhalation of air. We call it the nose. Yet look around, and you will not find two noses of exactly the same size and shape. Not only does the form of the nose differ from one individual to another; there also seem to be significant differences between populations. Should we suppose, then, that the underlying architecture of the nose is identically keyed in to all humans, as part of their innate makeup, to which inter-population differences, along with individual idiosyncrasies, are added by virtue of environmental experience? Anyone conversant with modern biology would have to say ‘no’. Did not Charles Darwin, in his epoch-making work *On the Origin of Species*, refute once and for all the essentialist doctrine that for every species there exists a pre-established template or design? It is not attributional identity, Darwin insisted, but genealogical proximity that unites the individuals of a species. All of us have noses, and the more closely related we are genealogically, the more alike they may look. But there is no such thing as the universal nose.

Indeed as Darwin showed, were it not for the intrinsic differences among individuals of common descent, natural selection could not occur. And if natural selection had not occurred, then neither *Homo sapiens* nor any other species could have evolved. Is it not strange, then, that as soon as we turn from morphology to behaviour – from what human beings look like to the ways they act, think and feel – we find that many contemporary biologists and psychologists have resort to a picture that is completely at odds with the principles of the Darwinian tradition in which they claim to work? There is, they insist, a universal architecture underwriting human mentality and conduct. In 1978, the founder of sociobiology, E. O. Wilson, published an influential book entitled *Human Nature*, in which he claimed that the entire course of history could be understood as a pre-ordained outgrowth of behavioural predispositions common to all humans and coded in what he called the genetic capital of the species.

Psychologists were quick to pick up the same tune. In their manifesto for an evolutionary psychology, John Tooby and Leda Cosmides insisted that all human newborns come into the world endowed with identical, genetically prescribed capacities, regardless of how they might be expressed – if at all – in their subsequent development. Although not yet walking, they all have the capacity for bipedal locomotion; although not yet

talking, they all have the capacity for language. It is true, of course, that the vast majority of humans do end up walking and talking, yet they do so in an astonishing variety of different ways. The body techniques of human locomotion, as Marcel Mauss famously showed, are as varied as the languages and dialects of the world. Yet these variations, we are told, are but culturally specific particulars, 'added on' in the lifetime of the individual through the effects of training, and experience, to a basic constitution that is already in place from the start.

Why do biologists and psychologists persist in their appeal to such alleged universals as bipedalism and language while attributing their evolution to a theory – of variation under natural selection – that only works because the individuals of a species are endlessly variable? To find the answer, we can return to the humble nose. As the organ of what has long been regarded in the western tradition as the inferior sense of smell – a sense shared by most quadrupedal mammals and often more developed in the latter – the nose is not implicated in the establishment of the human condition. Comparing the noses of different creatures entails crossing no ontological threshold. With bipedalism and language, however, it is quite different. From classical Antiquity through to the naturalists of the 18th and 19th centuries, and to the evolutionists of the 20th, western thinkers have repeatedly insisted that there is more to bipedalism than a certain way of getting around, and more to language than a compendium of communicative gestures. They have speculated on how the ability to stand and walk on two feet must have freed the hands from the function of supporting the body, allowing for their co-option as the instruments of an intellect increasingly liberated from its moorings in the material world. And if the hands were seen as the instruments of reason, then language was its armature. For it was precisely in their reference to concepts rather than objects, to the domain of ideal representations rather than material manifestations or, in short, to mind and not nature, that words were said to exceed the nonverbal gestures of nonhuman animals. Head held high, cognitively equipped for language and tool use, and exercising his superior sense of sight, universal man (for this was a strongly gendered discourse) was alleged to straddle the world, the master of all he surveyed.

In laying claim to the universality of bipedalism and language, biologists and psychologists are not, in truth, announcing a new evidence-based discovery of what all human beings have been found to possess in common. They are rather retelling a very old story for which, since it rests on metaphysical foundations, no evidence can possibly be adduced at all. This story serves, in effect, as a quasi-mythical charter for the practice of their own science, establishing a baseline for what it means to be human of which the very idea of human nature is of course a corollary. The great Swedish naturalist Carolus Linnaeus must surely have been aware of this when, almost three centuries ago, he struggled to find a set of anatomical descriptors that would distinguish individuals of the genus he had christened *Homo* from the apes. Eventually he settled for a word of advice, *Nosce te ipsum*, 'know for yourself'. Do you want to know what a human being really is? The answer, for Linnaeus and for his fellow philosophers of the Enlightenment, lies in the very fact that you ask the question. It is not one that nonhumans ask of themselves. To be truly human, then, is to look into the mirror of nature and know ourselves for what we really are.

Nor was the mirror cracked by the controversies that followed, a century and a half later, in the wake of Darwin's theory of evolution by natural selection. For then, as still today, in the principle of natural selection science saw the perfect reflection of its own reason. Darwin himself never wavered from the mainstream view that it was man's possession of the faculty of reason that allowed him to rise above, and to exercise dominion over, the world of nature. Where he differed from most (but by no means all) of his predecessors was in claiming that the possession of reason – or the lack of it – was not an all or nothing affair. In evolutionary terms, he thought, reason advanced by a gradual, if accelerating ascent and not by a quantum leap. But this implied, too, that in not all human populations was reason equally advanced and indeed that in some, it had scarcely advanced beyond the level manifested in the most intelligent of apes.

After a shaky start, Darwin's stock grew throughout the 20th century to the point at which he had become a virtual saint among scientists. Yet, the history of anthropology's flirtation with Darwinism has been far from glorious. Up until the outbreak of the Second World War, prominent physical anthropologists, drawing chapter and verse from Darwin's account of human evolution in *The Descent of Man*, were continuing to maintain that what were known as civilized and savage races of man differed in hereditary powers of reason in just the same way that the latter differed from apes, and that interracial conflict would inevitably drive up intelligence by weeding out less well endowed groups. But the second war in a century to break out among the supposedly civilised races of Europe, itself fuelled by xenophobic hatred, put paid to such ideas. In the wake of the Holocaust, what was self-evident to Darwin and to most of his contemporaries – namely, that human populations differed in brain power on a scale from the primitive to the civilized – gave way in mainstream science to a strong moral and ethical commitment to the idea that all humans – past, present and future – are equally endowed, at least so far as their moral and intellectual capacities were concerned. 'All human beings', as Article 1 of the Universal Declaration of Human Rights states, 'are endowed with reason and conscience'.

But this left the Darwinians with a dilemma. How was the doctrine of evolutionary continuity to be reconciled

with the newfound commitment to universal human rights? If humans are alike in their possession of reason and moral conscience – if, that is, they are beings of a kind that, according to western judicial precepts, can exercise rights and responsibilities – then they must differ in kind from all other beings which cannot. Somewhere along the line, our ancestors must have made a breakthrough from one condition to the other, from nature to humanity. Faced with this problem, there was only one way for modern science to go: back to the 18th century. Indeed the majority of contemporary commentators on human evolution appear to be vigorously, if unwittingly, reproducing the Enlightenment paradigm in all its essentials. There is one process, of evolution, leading from our ape-like ancestors to beings that are recognisably of the same kind as ourselves; another process, of culture or history, leading from humanity's primitive hunter-gatherer past to modern science and civilisation. Taken together, these two axes of change – the one evolutionary, the other historical – establish by their intersection a unique point of origin, without precedence in the evolution of life, at which our ancestors are deemed to have crossed the threshold of true humanity and embarked upon the course of history.

So after all, the dilemma remains. The only way humans can be made to appear different in degree, not kind, from their evolutionary antecedents is by attributing the movement of history to a process of culture that differs in kind, not degree, from that of biological evolution. The division between nature and reason is still there, but now shifted onto that between the exotic hunter-gatherer and the western scientist, the former epitomising a view of humanity in the state of nature; the latter the triumph of human reason *over* nature. Even today there are scientists who assert that through the study of hunter-gatherers, whether ancient or modern, we should gain a window on evolved human nature that is obscured, in the study of societies of other kinds, through the subsequent accretions of culture and history. So where does this human nature lie? How come that these capacities with which we are all supposed to be innately endowed have been faithfully handed down, over tens of thousands of years, apparently immune to the vagaries of history? For most contemporary students of human evolution, the answer is simple: because they are in the genes.

Now this response is palpable nonsense, and should be treated with the ridicule it deserves rather than paraded as one of the great scientific insights of the 20th century. Genes play a critical role in the synthesis of proteins, which are the principal materials of which organisms are constituted. They do not however programme the construction of an organism of a certain kind. The notion of the genetic programme is flawed for the simple reason that organisms are not constructed like machines, on the basis of preexisting design specifications. Rather they grow, a process technically known as ontogenetic development. Whatever capacities people might have – whether skills, motivations, dispositions or sensibilities – they are generated in the course of development. And at whatever stage in the life cycle, we may choose to identify a particular capacity – even at or before birth – a process of development already lies behind it. More importantly, people do not live their lives in a vacuum but in a world where they are surrounded by other people and things both living and nonliving, together making up what is usually known as the environment. Growing up in an environment largely shaped through the activities of predecessors, people play their part, along with everyone and everything else, in fashioning the conditions of development for their successors. This is what we call history.

There is, I contend, no human nature lurking inside us that has somehow escaped the current of history. Of course we all carry our complement of genes, but these do not set us up with a constitution all in place, ready to interact with the outside world. As all sensible biologists have long recognised, the dichotomy between nature and nurture is incoherent. Genes do not interact with the environment to produce the organism. They do not interact with the environment, period. They interact with other constituents in the cell, which interacts with other cells in the organism, which interacts with other organisms in the world. And it is out of this multilayered process that the capacities of living beings, including human beings, emerge. Humans vary in what they can do because, growing up in different times and places, they have encountered diverse conditions of development. This does not mean, of course, that a human being can be anything you please. But it does mean that there is no way of describing what human beings are independently of the manifold historical circumstances in which they become: in which they grow up and live out their lives.

The contemporary appeal to universal human nature in the name of evolutionary biology is, as I have shown, a defensive reaction to the legacy of racist science left by Darwin's account, in *The Descent of Man*, of the evolution of the moral and intellectual faculties. But it is an appeal fraught with contradictions. While insisting on the continuity of the evolutionary process, it also reinstates the twin distinctions between biology and culture, and between evolution and history, setting an upper limit to the world of nature that humans alone appear to have breached. Moreover the racism that modern biology claims to have left behind is never far beneath the surface. The potentially explosive combination of genealogical categorisation and essentialist thinking is still there. Far from dispensing with the concept of race, science has settled on the idea that all extant humans comprise a single race or subspecies, *Homo sapiens sapiens*. To thus affirm human unity under the rubric of a single subspecies is to do so in terms that celebrate the historical triumph of western civilisation. It is not hard to recognise, in the suite of capacities with which all humans are said to be innately endowed, the central values

and aspirations of modernity: uprightness, intelligence, technological superiority, artistic prowess and so on. Thus, we are inclined to project an idealised image of our present selves onto our prehistoric forbears, crediting them with the capacities to do everything we can do and have ever done, such that the whole of history appears as a naturally preordained ascent towards the pinnacle upon which we now stand.

Let me sum up. I have argued that there is no standard or universal form of the human being, underlying the variations so apparent to all of us. In their dispositions and their capacities, and to some extent even in their morphology, the humans of today are different not only from one another but also from their prehistoric forbears. This is because these characteristics are not fixed genetically but emerge within processes of development, and because the conditions of development today, cumulatively shaped through previous activity, are very different from those of the past. In this sense, the story of human evolution is still going on, even in the conduct of our everyday lives. But it is not a story of upward movement, from lower to higher, nor is it one of breakthrough to a superior level of being, over and above the organic. There never was a mighty moment in the past where the upper limits of nature were breached and our ancestors emerged onto the stage of culture, or where they could spread their wings and fly off into history.

In an essay penned in 1935, the Spanish philosopher José Ortega y Gasset declared that ‘Man has no nature, what he has is history’. Ortega’s declaration went on to become a rallying call for cultural anthropologists who thought it lent support to the idea that culture, and not nature, shapes human experience. But they were mistaken. The declaration was not about the primacy of culture. It was about the primacy of *life*. We should say ‘not that man *is*’, Ortega continued, ‘but that he *lives*’. It is a task that each of us is fated to carry on, for as long as we walk this earth. We can *be* only what we *become*, what we make of ourselves. I believe it is time to recognise that our humanity does not come prepackaged with species membership, nor does it come from having been born into a particular culture or society.

‘Life is a task’, wrote Ortega, and the only thing that is given when there is life is the *having to do it*. Unlike the incongruous hybrids of biology and culture that populate so many anthropological textbooks, real-world humans continually grow themselves, and each other, in the crucible of their common life. They are what they do, and what they do is human. Or in a word: *to human is a verb*.

Veena Das (for the motion)

[to follow]

Ruth Mace (Against the motion)

I will just remind you of the motion: ‘Humans have no nature, what they have is history’. I am opposing it. [SHOWS PAINTING ‘Monkey Parliament’ BY BANKSY]. I am glad you laughed, because that means the debate is already successfully opposed. There are lots of reasons why you are probably laughing. This is a painting by Banksy, who is one of Britain’s more famous contemporary artists. One of the reasons you laugh when you look at it is because chimpanzees don’t debate. As Sarah Hrdy pointed out in the introduction to her recent book on *Mothers and Others*, you can’t even put this many chimpanzees into an enclosed space without causing complete chaos. They don’t think about things, they don’t talk, and they’re not particularly social beings.

One of the definitions of human nature, something that is distinctly characteristic of the way humans are, is that we are different from the way our nearest relatives are in terms of other species. We know that instinctively, as Tim already said. Although you could possibly take the view that the reason we are different is because chimpanzees have had different environmental exposure. If you gave them the same kind of upbringing as a human then maybe they could learn to talk, or maybe they could learn to socialize, or maybe they could do all of these things.

[SHOWS PICTURE OF CHIMPANZEE in a red sweater.]

This is Nim, who is one of many in a long line of unfortunate chimpanzees and other great apes who have been raised by humans who tried to teach them to speak, to behave like a human, and all sorts of other things. Especially in the 1970s there was a fashion for this, which was singularly unsuccessful. Sometimes the chimpanzees concerned ended up doing something like biting the ears off the person who was trying to train them, or other such things, as they got so frustrated. Anyway, this is probably the broader definition of a human nature: that there are broader characteristics of humans that we don’t see in other species, even our nearest relatives.

But there is another interpretation of the whole nature–nurture debate, which Tim also touched on, which is not ‘is there something about humans that is different from other species’, which there clearly is, but given that there is variation between humans, how much of that can we attribute to nature versus nurture, or culture (or whatever you want to describe it as). This motion is a quote from Ortega, but thinking about this obviously goes way back beyond that. Probably one of the most famous protagonists of this view was the seventeenth-century philosopher John Locke, who talked about the tabula rasa. He suggested the mind is a ‘blank slate’ and that all sensory experience post-natally determines an individual’s characteristics, personality, etc. A more recent variation on that theme comes from twenty-first-century psychology; there was a movement known as behaviourism, which dominated especially American psychology from the 1920s to the 1960s. As we have already talked about, that was a time in history when there were eugenic views going on in the world. Behaviourism was a rather appealing view, not least because it promised change, potential for improvement, and fitted with the American dream. Where you get an extreme on one side, you often get an extreme view appearing on the other side, and by extreme I mean total, as in the nature of this debate: that everything is determined by learning.

[SHOWS PHOTO of John Watson] This character is somebody called John Watson, who started the behaviourism movement. To paraphrase: ‘Give me a child and let me control the total environment in which he is raised and I will turn him into whatever I wish.’ I think the Jesuits said something similar. Then there was Skinner, famous for the Skinner box, in which he trained rats to do all sorts of things. He was convinced that you could train almost anything to do almost anything. That photo is of him putting his daughter in the Skinner box, which is probably one of the things he became famous for, partly because everybody was shocked by that.

So what elements of the variation in our nature might be to do with our genes, or our physiology, or our makeup, or our nature, or the way we are brought up? The trouble with the behaviourist view is that, to cut a long story short, this is almost a bit of a non-debate because we now know that everything is influenced in some measure through environment and in some measure through genes, for virtually everything that has ever been looked at in the domain of behaviour. Let’s take the example of gender as one obvious question, for example. Most of us from a fairly young age have a reasonable idea of whether we prefer to have sex with men or women. There was a paper written by John Money in 1972, which was a very sad story of a boy called David Reimer, who was born in 1963. After a badly botched circumcision, the doctor treating him (which I think was John Money) decided that the best thing to do was surgically remove what was left of the male genitalia and feed him oestrogen and reassign him into a girl. He reported nine years later that this had been an entirely successful operation and that David, now renamed Brenda, was happy as a girl, and this became medical lore. Unfortunately, this wasn’t true, as you can probably well imagine. Once people looked at what had actually happened to David (Milton Diamond wrote up the case), it was clear David Reimer never felt comfortable as a female. He rebelled at 14 when he was pressurized to complete his sex-change operations. He eventually had a sex reversal to male and married a woman, but wasn’t happy, and in 2004 he committed suicide. So, it’s not helpful to have a simplistic view of these things.

Now, gender might be a special case [of something which has a genetic component], but it’s not. There are all sorts of other areas of behaviour where there is all sorts of evidence. I don’t agree that it’s not possible to find evidence on this. Here is a paper that was published in Science in 2003 on genetic determinants of depression. Most of us have two versions of this particular allele, which are called the long and short version of the 5-HTT. (Geneticists always have very interesting names for bits of DNA.) This study followed about 850 children in New Zealand from infancy and monitored instances of depression. We know that this 5-HTT gene is associated with regulating serotonin.

Tim Ingold just said that genes and environment don’t interact. Of course they interact, and in fact one of the most interesting areas of genetics at the moment is how they interact. It is a huge area of research that it is on-going. But the fact that they interact is also one of the reasons why people have difficulty grasping this debate. Journalists certainly have difficulty grasping this debate. Lots of people have difficulty understanding multiple causation. Let me give you this example. If you have this short allele version of HTT (and you can probably go and get yourself tested), you are more prone to depression than average members of the population. If you have the long version of the allele, you are less prone. But it’s not as simple as that. We also know that there are environmental causes of depression. If you experience traumatic life events – bereavement being a big one – you are more likely to get depressed. Amongst the children that didn’t experience any major traumas in their young life, about 30 per cent of them were depressed at some point but their genetic make-up didn’t make any difference. But amongst those that had had either some or severe trauma during their first 26 years, those with one copy of the short allele were more likely to get depressed, and those with two copies of the short allele were even more likely to get depressed. Also, the more severe the trauma, the more likely they were to get depressed. So here is a picture, right here, of genes and environment interacting. Nature–nurture then is in a way a little bit of a non-story because the answer is always the same: we are the product of both genes and environment, and

there is not a lot more to say than that. This is a quote from Sapolsky: ‘Genes don’t cause behaviors. Sometimes, they influence them.’

I’m going to summarize the two main points that I’ve made. I think this motion is quite easy to oppose because it is an absolutist motion and, as I have already said, everything is a little bit of both. If you don’t believe that humans have any specific nature relative to the apes then you are taking a slightly unusual position because, amongst other things obviously, the ability to speak and a far greater capacity to learn are somewhat unique human adaptations compared with any of our evolutionary ancestors. Ironically our capacity for culture is indeed one of the things that makes us human and makes anthropology so interesting. Other species do not have such a strong capacity for culture. They do not have the genetic adaptations that enable them to do the things that we do.

If you want to take the other interpretation of human nature, which is that people have a specific nature relative to other people and that it is something to do with their biology and not just to do with their history, then, as I have mentioned before, all behaviours studied do seem to have some level of both genetic and environmental determination, in varying quantities. The idea that training can somehow remove those differences, or make us all the same in some way, or make us other than we are without taking any note of the fact that individuals might have different genetic capacities, is ignoring quite a lot of the evidence to the contrary, some of which I just gave you.

Juichi Yamagiwa (Against the motion)

Man is still traveling between nature and history

I am partly in agreement with the dictum of Ortega y Gasset: “Man has no nature, what he has is history.” He said, “Man goes on accumulating being - the past”, “with historical reasons.” Past experience inevitably influences man’s decisions on what to do and how to act in the present and in the future. He also said, “Man is impossible without imagination, without the capacity to invent for himself a conception of life, to ideate the character he is going to be.” Man can imagine himself as who he was, who he is, and who he will be. However, I do not agree with the first phrase, “Man has no nature.” Instead, I propose that man is still traveling between nature and history (or culture), and that non-human animals also have a history.

In our society, we can find norms or precepts belonging to both nature and culture. Those forming the human family are good examples. Claude Levi-Strauss (1956), the famous anthropologist, stated that man, since he emerged from his animal state, has not enjoyed a single basic form of social organization, although earliest society, in its fundamental principles, would not be essentially different from our own. He emphasized that, if social organization had a beginning, this could only have consisted of the incest prohibition since, as we have seen, this prohibition is, in fact, a kind of remodeling of the biological conditions of mating and procreation. He regarded the incest prohibition as a step in our passage from nature to culture. However, he thought there was no such rule in animal life.

From the beginning of modern primatology in Japan in 1948, just after World War II, Japanese primatologists have tried to find evidence of social continuity between humans and non-human animals. They habituated groups of Japanese macaques and recorded their social interactions by naming and identifying each individual. They found that each macaque recognized individual conspecifics and changed its behavior according to their social relationships, such as dominant/subordinate or kin relations. Their first important findings were pre-cultural behavior and incest avoidance. Washing potatoes with seawater was observed as a newly acquired behavior by Japanese macaques, and it was transmitted from a young female to most of a group’s members on Koshima Islet, Japan. It was regarded as having cultural aspects of transmission without heredity. In the 1960s, tool-using behavior was discovered in a wild population of chimpanzees at Gombe Stream, Tanzania, and primatologists started to argue that chimpanzees have cultural spheres of tool-use.

Incest avoidance was first observed in a mixed group of rhesus and long-tail macaques at Kyoto Zoo, and subsequently in a provisioned troop at Koshima, Japan. The most dominant males in both groups were not seen to have sexual interactions with their putative mothers, even when these mothers got estrous and copulated with subordinate males. After long-term observations were accumulated, the tendency of mating avoidance among related individuals (from mother-son pairs to cousins) was confirmed to exist in the matrilineal society of macaques. Moreover, recognition of kinship is not an innate ability but is acquired after birth through affiliative interactions. Unrelated male-female pairs of Japanese macaques having prolonged proximate relationships were observed to avoid sexual interactions during the mating season. In a confined group of Barbary macaques, sexual interactions were observed among paternal relatives, linked through paternity identification by DNA analysis, as occurred between unrelated dyads, while it rarely occurred between maternal relatives. However,

dyads of caretaking males and cared-for females were avoided as maternal relatives. Male Barbary macaques are known to show intensive caretaking of weaned juveniles. When these juvenile females mature, both parties avoid sexual interactions. These observations suggest that accumulated experiences (history) have a great influence on individual decisions of whether and how to interact with other conspecifics.

I found that mating avoidance acted as a feedback effect on male-female association. In a small group of Japanese macaques, formation of prolonged affiliative relationships between a female and a male prevent sexual interactions between them and thus decrease the number of mates and the opportunities for mating. This consequently leads to emigration of males or females from the group. Therefore, mating avoidance may stimulate individual dispersal and constitutes an important factor forming the social structure of non-human primates.

In contrast to the maternal society of macaques, the great apes form non-maternal societies, in which females emigrate from their natal groups. Among them, only gorillas form cohesive groups with prolonged association of males and females. Male gorillas show positive caretaking of immatures from weaning to puberty, and young females tend to avoid sexual interactions with their putative fathers, probably through these affiliative interactions during immaturity. Mating avoidance may decrease the opportunity of mating for maturing females in a small group in which their putative father is the only adult male, and thus prompt their emigration. Therefore, mating avoidance contributes to the formation of reproductive pairs outside the natal group, as observed for incest inhibition and exogamy in human communities.

Infanticide also influences female choice of transfer; this has been observed among primate taxa in the wild as the male's reproductive tactic of forcing the resumption of a female's estrus by killing her suckling infant and compelling her to mate with him. Under conditions of frequent infanticide, female gorillas tend to transfer into multi-male groups to seek more protection, while maturing males tend to remain in their natal groups to share with related males the opportunities of mating. Such situations promote association and coalition among related males and the formation of multi-male groups. By contrast, the lack of infanticide stimulates female movement with immatures between groups and male emigration from their natal groups. These situations promote the separation of mature males and thus the formation of single-male groups. The occurrence of infanticide may hinder females from voluntary movement and promote the reliability of paternity. As observed in mating avoidance, infanticide has the potential to modify social structures. Mating avoidance and infanticide may have enhanced family formation by providing the opportunity of female transfer and by increasing alliances among relatives in the early phase of human evolution.

Let's look at the major ways in which humans distinguish themselves from gorillas: 1) incest inhibition is a kind of sanction established as a norm, 2) the decision of new family formation is not made by individuals but by the group, 3) emigration and transfer of females or males into other families is a form of reciprocal exchange between family groups, 4) dispersed individuals keep lifetime bonds with their relatives, and 5) these prolonged relationships form strong bonds between family groups. Incest inhibition structuralizes human society by shaping the natural tendency to adhere to an artificial (cultural) norm. However, this modification is also found in its primitive form in non-human primates. As Lévi-Strauss said, "Society belongs to the realm of culture while the family is the emanation, on the social level, of those natural requirements without which there could be no society, and indeed no mankind."

The most striking difference between a human's life and that of an animal is his or her imagination. Man can make his own story based on his experiences and knowledge. He can imagine what he is capable of being. He can evaluate his past actions from a viewpoint in the present and actually place himself in the past world. Such imagination forms his present and future. Ortega said, "Man goes on accumulating Being - the past; he goes on making for himself a being through his dialectical series of experiments. This is a dialectic not of logical but precisely of historical reason." However, a machine, such as a robot or computer, can make decisions based on accumulating information. Could we say that a robot also has a history? My answer would be no. A robot has no ability of imagination, and it cannot act without the information it has acquired. The past constitutes one of the limiting factors of man's view, but it is not sufficient. Man creates a fiction about his being. He can imagine what he was, even if it is not true, and he thus makes himself upon his fictions. This is the only ability unique to man. As Ortega said, man lives in view of the past. He also lives in his own story, however fictitious.

The ability of imagination derives from empathy and sympathy. The discovery of a mirror neuron in the 1990s suggests the existence of empathy in nonhuman primates. When a macaque observes an action of his conspecifics, he can feel as if he acts it. The visual cue makes him empathetic. However, a macaque is not able to recognize that the other does not know what he knows, and he does not show sympathetic action. The great apes, such as orangutans, gorillas and chimpanzees, have the ability of scaffolding. They can recognize that their conspecifics face a dangerous situation due to their lack of knowledge, and they occasionally help conspecifics. This suggests that great apes may have the ability of sympathy.

Recent studies have also found that great apes have the abilities of self-recognition and mind-reading of others, that is, a theory of mind. These cognitive abilities are linked to those of humans. However, great apes have no ability of imagination. They never imagine what they will be, set their goals in life, have ideals, or admire any subject. Lack of these abilities is consistent with the lack of teaching in great apes. They cannot imagine how to assist others to achieve the goal of learning.

Man is called a “cultural omnivore”, meaning that he keeps an omnivorous diet with artificial modification of natural foods (cultivation, livestock farming, cooking and producing artificial foods). Such modification is observed everywhere around us. We could hardly live without language, clothes, and shelter. We usually construct an artificial niche with components of culture. We live in a community characterized by various norms based on empathy, sympathy and identity. We usually control and direct our biological demands with cultural devices, and, on the contrary, artificial concepts or imaginative fictions drive our physical and mental actions. Social life and the ability of imagination always push us back and forth between nature and culture. Thus, man is still traveling between nature and history.

Discussion

(Summary by Simone Abram)

Several themes emerged in the discussion in response to the enduring but rich question, ‘what is human nature?’. The position of those raising questions in support of the motion was that human nature applies to all humans equally while human culture is diverse, while those opposing the motion emphasised the diversity of human genetics alongside the diversity of culture. Prof. Yamagiwa asserted that human babies require multiple adults to rear them. Human babies cry to attract care, in contrast to ape infants, thus providing a human universal based in biology. Ruth Mace was keen to clarify that both genetics and culture vary, that is, variation is found in both history and nature, but that this does not help in answering the motion.

Questions were then raised about epigenetics, and the idea that humans are the product of both genes and environment. According to Tim Ingold, this would be a rejection of history, since as Marx observed, we produce our own selves, but under circumstances that we bequeath from the past. Epigenetics thus loses sight of history and generalises western concepts of the environment as a separate sphere from the human. Ingold was particularly concerned about the use of essentialising concepts of the human by evolutionary biology and evolutionary psychology, which, in his view, carry dangerous political overtones. Tim Ingold was challenged by a question that cited his book *Evolution and Social Life* as arguing that humans have nature, which contradicted his position in the debate. Ingold explained that in the 27 years since the book’s publication he had changed his mind about some issues.

Veena Das picked up references in several questions to Sarah Hrdy’s research on the human and gorilla eye, noting that contemporary scientific approaches to the eye cannot be understood apart from their inheritance from theological debates about the eye. Ingold insisted that the eye is merely the instrument of the human gaze, which is shaped by historical circumstance, but Das reminded the present company that the eye does not only see, it also weeps, providing multiple metaphors for human relations with others. Das was keen also to emphasise that her discussion of multiple ontologies requires us to pay attention to the worlds within which claims are made about nature: ‘the worlds in which people could imagine jaguars to be their brothers-in-law at one time, were worlds at the point of extinction, partly because of the way in which notions about what is proper to human nature and what is it that needs civilizing were in fact being put into operation through extremely brutal colonial regimes’. Thus, in historical terms, she argued that one must admit that there are multiple natures.

A second key point of discussion was the notion of human nature as a scientific concept, which itself has a long and diverse history. The concept ‘human nature’ can be considered to be philosophical, theological and legal, and is thus a concept with particular histories. Since history itself might be considered a peculiarly human faculty, the motion might itself be reframed by asking about the history of ‘human nature’. However, this was not the motion in question, which argued that humans have no nature. Veena Das referred to a kind of vertigo, which arises when we question the given-ness of Nature since it is this concept that assures us of the naturalness of our moral universe. Without this fixed reference point, moral certainty also threatens to collapse. But Das argued that it is the friction between the given-ness of nature and the moral visions that humans aspire to that provides the moral universe. Science attempts to remove that friction; yet, if we acknowledge that we not only represent the world differently, but live in different worlds, we can also acknowledge the force of history. This is further complicated by the link between the idea of human nature and the concept of human rights, which relies on the unity of human nature to universalize pan-human rights. Ingold asked how we are to reconcile, ‘a commitment to the totality of life to flexibility, to diversity, to tolerance, with a juridical notion of human

rights'. He suggested that one might start with the idea that it is difference that connects humans, not similarity. If this were so, Ruth Mace asked, then must differences in history and biology lead to differences in human rights? Taking such stances on moral questions moves well beyond the more factual position of the motion under debate, which is that humans only have history, whereas for Mace, humans do not have *only* history.

A third strand of debate asked what the question of human nature achieves. Defining physical labour or war as part of 'human nature' has led to the naturalization of certain practices. Such biologisation is a way of taking the realm of contestation away from the political, allowing cultural practices to appear to be based in biology. An example was offered of the definition of Tutsi men being tall and weak, and therefore having political power while leaving women do physical work, while Twa men being very short have very little political power. The source of authority of such racial arguments lies in their biologisation (as Mary Douglas observed in her thesis on institutions).

After 15 questions, and responses from the four speakers, the members of the audience were invited by the Chair, Marilyn Strathern, to cast their votes. She thanked the audience for their enthusiastic participation and declared for the motion 134 votes and against the motion 77. The motion was thus carried with a majority of 57.

Edited by Simone Abram.